INFORMATION ABOUT BRACHIAPLASTY

(ARM SKIN OR BAT WING REDUCTION)

Introduction

The trimming of slack skin and/or the reduction in the bulk of the fat in the upper arms (between the armpit and the elbow) is called brachioplasty.

It involves a combination of fat reduction by liposuction and removal of a long ellipse of skin. One leaves behind the nerves and the arteries and veins which serve the skin which run between the muscle and the skin. In some people one needs to remove very little fat and a lot of skin, but in other people one needs to do a lot of liposuction and a moderate amount of skin removal. In a few people one only needs to do liposuction because the skin is sufficiently elastic to shrink, but this seldom applies in people over the age of 30.

The biggest problem about brachioplasty is the quality of the scar from removing the skin. I cannot emphasise enough how disappointing and troublesome the scar can be in some people (but not in everybody).

If one simply does liposuction the skin will shrink in young people who have big fatty arms but in anyone over the age of 30 to 35 it is very likely the skin will fold and wrinkle and the cosmetic result will be disappointing.

In the vast majority of people brachioplasty involves a combination of liposuction and removal of skin. The liposuction part makes the skin removal very safe, quick and easy and one doesn't need to undermine the skin, ie one doesn't have to cut the nerves and the arteries going to the skin which is adjacent to the panel of skin one removes.

The time consuming part of the operation is the careful sewing up of the gap in the skin left from removing this long ellipse. The way the skin heals determines the quality of the scar. The problem about long scars is that they tend to shrink and go hard and can look quite unsightly.

It is very important to make the scar as inconspicuous as possible. One needs to position it so that it lies adjacent to the side of the chest in parallel with a line drawn between the armpit and the hip. In this way it is less likely to be seen either from the front or the back. It is impossible to hide the scar when the arms are bare and elevated.

When planning the operation one needs to mark the lines of the skin to be removed before doing the operation. One does this with the person standing up because when they are lying down the skin rotates around the arm and it is possible to remove skin from the wrong place.

In closing the wound one uses a technique which hopefully will produce a soft and as narrow a scar as possible, but the way in which people heal

varies a lot between individuals. Usually one closes the skin with internal dissolvable stitches and then joins the skin edges neatly together with a dissolvable running stitch within the skin surface. This avoids having any visible external stitch marks. However, there is always a risk that the scar will tighten, thicken and harden and become "hypertrophic." A hypertrophic scar is a raised purplish scar which is unsightly, uncomfortable, itchy and very noticeable. Hypertrophic scars need to be treated by either compression or the application of silicone gel or sometimes the injection of steroid.

A hypertrophic scar can take 6 to 18 months to settle down and can go on improving for a further year or 2 after that and so it may be 3 or 4 years before the scar is at its best.

I have written an information sheet about hypertrophic scarring which you can get from my secretary if you are interested.

Complications and Problems

If the operation is being done on its own, ie not in combination with other operations on the same person, it is usually possible for the patient to return home the same day as the operation but some may find it much more comfortable to stay in hospital overnight after the surgery. If a person has a sedentary job, ie an office job, they may well be able to return to work within a week of the operation but hands on manual work may well need much more time off, possibly 2 to 4 weeks.

Brachioplasty carries the same risks as all other operations such as pain, tenderness, bruising and some degree of numbness which can be expected to settle down over the first week or so following the operation. The other more serious risks are infection, breakdown of the wound, a haematoma, skin damage and skin loss, a deep vein thrombosis leading to a pulmonary embolus and of course the scarring which is inevitable in the sense that one has to shut the skin together in a long wound. In many ways the most important complication is that the patient may get a cosmetic result which is poorer than they expected because of the scar.

Consequences and Frequency of the Complications

Nearly everybody will feel pain to some extent. Pain can be reduced by infiltrating the wound with local anaesthetic and the person may need to take some quite strong painkillers for several days after the operation. The skin of the arm may feel very tight and the arms will be tender to occasional knocks or bumps or if someone unknowingly holds onto the arm. It is sometimes helpful for the person to wear a tubigrip bandage on the arm to reduce some of the swelling for the first week or so after the operation.

Haematoma

In about 1% to 3% of these operations there is a bleed underneath the skin which results in a blood clot in the wound causing swelling, bruising, discolouration and pain. If the blood clot has arisen from a bleeding artery

the haematoma will probably swell considerably and quite rapidly and this will need a small operation to stop the bleeding and to remove the blood clot. It is most likely to occur in the first few hours after the operation as the patient wakes up because the blood pressure was probably slightly lower than normal during the course of the operation and as the blood pressure rises the bleeding occurs.

Fortunately a haematoma is not life threatening and it may not require an emergency operation, but is usually better to try and deal with it in as short a time as possible in order to lower the risk of it developing an infection.

Haematomas seldom cause any long-term problems and are just a short-term nuisance. If a haematoma is neglected, it is possible for the skin overlying the haematoma to die and obviously this is much more serious.

Unless you are having to take Aspirin for your heart, it is inadvisable to take any Aspirin like drugs for a fortnight before you have this operation because there is a much higher chance of you bleeding from the wound or underneath the wound if you have taken Aspirin in the 2 weeks prior to the surgery. Aspirin has an adverse effect on the function of platelets in the blood and prevents clotting and so it is much more likely that a person taking regular Aspirin will bleed a bit or bruise more and if it isn't essential for you to take Aspirin then avoid it and use an alternative painkiller, such as Paracetamol.

Seroma

A seroma is a fluid collection, ie blood without the red cells, which can form underneath the skin and is usually due to leakiness from the lymphatic vessels. Seromas usually settle by themselves but can be reduced in size by sucking out the fluid. Most seromas in the arm after brachioplasty are a minor inconvenience and are only very troublesome if they become infected. The chances of getting a seroma are probably in the region of 1% to 2%.

Infection

Infection is a complication of almost all forms of surgery and in the case of a brachioplasty it will occur to a minor or major degree in between 3% and 5% of cases. Minor infections along the line of the wound are common but seldom particularly troublesome and simply show themselves as an area of redness or extra soreness, sometimes with the development of a small fluid discharge which looks pusy but it usually responds quickly to cleaning and antibiotics.

A major infection, causing cellulitis and making the patient feel very ill, is fortunately very rare and will occur in only 1% to 2%. The patient may benefit from intravenous antibiotics and they may need to be in hospital for this for a day or 2. A serious infection can cause breakdown of the wound and sometimes damages the blood supply to the skin and so there is gaping of the wound and effective skin loss, but I have never come across a case like this although I have heard of this.

Most infections can be prevented by giving the patient an antibiotic at the time of the operation, but even so preventative antibiotics don't completely

eliminate the risk of infection because sometimes the antibiotic that one gives will not deal with all the potential range of infections.

Wound Breakdown (Splitting Open of the Wound)

If the Surgeon is "over ambitious" and tries to remove too much skin and thus closes the wound with excessive tension, there is a possibility that the wound will burst open and one will see a raw wound, possibly in the centre of the arm and probably a few centimetres long and a centimetre or so wide. This may be correctable by simply restitching the wound or it may be treated conservatively by simply applying regular dressings and allowing the wound to heal over a period of 3 or 4 weeks or it may be considered worthwhile to put a skin graft where the wound has broken.

It is more likely that a wound is going to breakdown in someone who starts to smoke immediately after the operation and so, if you are a smoker, please be sensible and don't smoke for at least 3 weeks after this operation to ensure optimal healing.

Skin Loss/Skin Necrosis

Skin loss or skin necrosis should be very rare indeed after a brachioplasty. It is very rare indeed in a non-smoker and much more likely in a smoker. **NB:** The blood supply to the skin is critical to its health. If the skin is stretched too much or if the person smokes or if the blood vessels have for some reason been cut, then the overlying skin which those blood vessels normally serve can be deprived of its circulation and the skin will die.

The skin will first go to a blue purple colour and then to a black colour. Sometimes this merely affects a few millimetres along the edge of the wound and can usually be treated without another operation but it will end up by healing with a wider scar.

Scarring

I have already mentioned the problems about the scar which occurs after a brachioplasty. It is important to try and position the scar in the optimal place on the arm but there is enormous variability in the quality of the scar, even though it may be positioned well. Some people have a strong tendency to produce a hypertrophic scar and such people will almost certainly benefit from a compression garment to be worn after the operation or may need special silicone gel treatment along the line of the scar. The scar may well look very satisfactory in the first 2 or 3 weeks after the operation and you may think that you are going to be free of problems, but the scars tend to be at their worst about 6 to 8 weeks after the surgery and this is the time when you should be reviewed by your Surgeon and to get his or her advice about how the manage the scar.

It may be helpful to apply some adhesive tape or strapping along the line of the scar for the first 2 months after the operation because this will reduce the tendency of the scar to widen and it may help it to become paler sooner than if you don't strap it.

"Dog Ears"

What a strange name! A dog ear is the bulge in the skin at the end of the wound due to the gathering of the soft tissues from the pleating effect of shutting an elliptical wound together. One can reduce a dog ear by sucking out the fat at the end of the wound so that one is pleating only skin rather than skin and fat, but even so there may be what looks like a little bulge in the skin at either end of the scar and this is called the dog ear. Sometimes it is necessary to trim it and this is usually done some 2 to 3 months after the operation when there is no further hope of the dog ear settling. It is usually something which can be done very easily under local anaesthetic.

It is almost inevitable that one will get a small bulge at the end of the scar because the skin has lost its elasticity. If the skin had kept its elasticity you probably wouldn't be needing a brachioplasty anyway. Because the development of a dog ear isn't necessarily the demonstration of anything substandard about the operation you may well be asked to pay for any dog ear excision if it follows a brachioplasty.

NB: They are not always the fault of the Surgeon but it is due to the intrinsic nature of the skin of that patient.

Deep Vein Thrombosis/Pulmonary Embolus

During an operation the flow of blood in the lower limbs slows down because the anaesthetic causes a loss of muscle tone, ie a loss of the background contraction of muscles in the leg. Some people are prone to clotting of the blood in the big veins in the legs. If the clot becomes stuck to the inside wall of the vein, this is known as a deep vein thrombosis. If a large blood clot gets stuck to the inside of the vein but then there is a sudden movement of the leg, this may dislodge the clot and it then gets swept up towards the heart and lungs and may interfere with heart and lung function. On very rare occasions it will cause the heart or the lungs to cease function and the person will die. It is therefore a potentially very serious complication, but it depends on the particular type of surgery that you are having as to what we do to prevent DVT.

The first thing is to compress the legs with special graduated stockings (TED stockings). These are fitted for you before you have your operation.

The next thing that can be done is to apply compression to your legs during the course of the operation and this is achieved with a pneumatic cuff around the calf which gets inflated every few minutes so that it achieves the equivalent of a massage of your calves while you are asleep under the general anaesthetic. This forces the blood out of the legs sufficiently often to stop you building up a large clot in any of the veins.

Another thing which can be done is to make the blood less sticky with anticoagulants or Aspirin before doing the operation, but as already mentioned it is better not to use these drugs unless you have to because you can bruise excessively or bleed and produce a haematoma.

Therefore most plastic surgery is done using TED stockings and intermitted pneumatic compression (Flowtron boots).

Thus, in summary, a balance has to be agreed between the patient and Surgeon as to the level of risks of the complications from a deep vein thrombosis and the risks of bleeding causing a haematoma and widespread bruising which will spoil the cosmetic result.

If you know that you are prone to bleeding or prone to clotting or have a history of deep vein thrombosis, then this must be discussed carefully with the Surgeon.

Conclusions

Brachioplasty can achieve a very satisfactory improvement in the overall appearance and shape of a person's arms. However, before undergoing this surgery you must have a good understanding of its limitations.

I hope that this information sheet helps to explain more about it.

If you are advised by a Patient Co-ordinator or a Surgeon that it is an easy and successful operation with no serious risks and it is unlikely that you will be disappointed, then such a person is not to be trusted because this is frankly dishonest.

Brachioplasty is an operation in which it is not easy to achieve consistently successful results because of the variability of human beings. This is in marked contrast to a lot of other cosmetic surgery operations in which one can be fairly sure of getting a good result. In the case of brachioplasty the main problem is the scar and its variable quality between different people. If you are lucky you will get a superb result but if you are one of the unlucky people, particularly those who are known to be prone to hypertrophic scarring, then it may take you 2 years before the scar becomes acceptable.

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